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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/695,349 | 11/10/2004 | Richard Jason Jouet | 84,777 | 5978 |
| 24338 | 7590 | 04/21/2008 | EXAMINER | |
| DEPARTMENT OF THE NAVY | | | MCDONOUGH, JAMES E | |
| OFFICE OF COUNSEL | | | ART UNIT | PAPER NUMBER |
| 3824 STRAUSS AVE, SUITE 103 | | | | 1793 |
| Indian Head, MD 20640-5152 | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | |
|------------------------------|--------------------------------|------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/695,349 | JOUET ET AL. |
| | Examiner JAMES E. McDONOUGH | Art Unit 1793 |

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 14 December 2007.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-3,5-12 and 14-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-3, 5-12, and 14-22 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) Notice of Informal Patent Application
- 6) Other: _____

DETAILED ACTION

Original Rejections

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-3, 5-12, 14-20, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guire et al. (US 2003/0077452) in view of Van Alsten (USP 6,299,983).

Guire et al. teaches self-assembled monolayer forming polyethers covalently attached to a substrate (paragraphs 0047-0048), the use of particles of support such as aluminum (paragraphs 0032-0035), the use of azide functional groups (paragraph 0067), where the coating passivates the surface of the support (paragraph 0080),

having sizes of less than 1 micron (paragraph 0005), and the polymers comprising between 10-80 wt. % of the molecule (paragraph 0052).

Although, Guire et al. do not explicitly teach the use of multifunctional linking groups or fluorine atoms appended to the backbone, Guire et al. do teach the rest of the limitations of the claims. However, because Van Alsten teaches an improvement of adhereability to attach organic species to metal surfaces using α - ω difunctional species, where the selectivity is controlled by determination of the functional group used (column 9, line 65 to column 10, line9), and Van Alsten also teaches that by fluorinating the linking backbone, thermal decomposition is lessened when compared to the fully hydrogenated backbone (column 5, lines 27-43), it would have been *prima facie* obvious to someone of ordinary skill in the art at the time the invention was made to modify the teachings of Guire et al. by employing a difunctional backbone that comprises fluorine atoms, as suggested by Van Alsten, because Van Alsten disclose that we can achieve better adhereability and better decomposition properties. Van Alsten also teaches using perfluorooctanoic acid (column 4, lines 18-32) and an α - ω dicarboxylic acid to treat metal surfaces (column 2, lines 12-18).

Although, both Guire et al. and Van Alsten are silent as to whether their compositions would be castable, pressable, and/or sinterable, a similar composition would be expected to have similar properties absent any evidence to the contrary. Furthermore, these are considered to be inherent properties, as to limitations which are considered to be inherent in a reference, note the case law of *In re Ludke*, 169 USPQ

563; In re Swinehart, 169 USPQ 226, In re Fitzgerald, 205 USPQ 594; In re Best et al., 195 USPQ 430; and In re Brown, 173 USPQ 685, 688.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Guire et al. (US 2003/0077452) in view of Van Alsten (USP 6,299,983) as applied to claims 1-3, 5-8, 11-12, and 14-20 above, and further in view of Bradshaw (USP 5,594,064).

Although, Guire et al. does not explicitly teach the use of ethylenically unsaturated crosslinkable group, Guire et al. does teach the use of crosslinkable groups. However, because Bradshaw teaches cross linking and using ethylenically unsaturated polymers, it would have been *prima facie* obvious to someone of ordinary skill in the art at the time the invention was made to modify the teachings of Guire et al. and Van Alsten, as suggested by Bradshaw, because Bradshaw shows a successful route to cross linking by using ethylenically unsaturated polymers.

Response to Arguments

Applicants argue against the 103 rejection over Guire in view of Van Alsten.

Applicants argue that Guire teaches providing surfaces with desirable properties for interaction with bodily fluids. While this is correct Guire teaches surfaces such as implantable devices, applicants are reminded that a reference is good for all that it teaches and the reference of Guire is not limited to implantable devices, as suggested by applicants.

Applicants that Guire does not "suggest using a derivatized metal surface, including an aliphatic acid backbone, of....as disclosed in Van Alsten". This is considered to be improper piece meal analysis of the references. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicants argue that Guire teaches away from the use of conventional polymeric surfaces. This is not persuasive because: 1.) For a reference to teach away there has to be some teaching or suggestion that the specific combination WILL NOT work, however, the examiner can find none and applicants have not pointed towards any. 2.) Guire at paragraphs 0035 and 0036 clearly teach the use of polymeric materials such as polystyrene, polycarbonate, polyester, polyolefin, polypropylene, PTFE, polyurethane, PVC, polyacrylate, polymethylacrylate, silicone elastomers, and more. If these polymers are not conventional than what are they? What are conventional polymers?

Applicants argue that the α - ω species of Van Alsten the α end binds to a metal surface while the ω end associates with molecules other than a metal surface, looking at figure 2 we can clearly see that the ω end is associating with zinc.

Applicants argue that the ω end is bound to a metal salt and not a metal surface, but when the ω end replaces the anion on the salt is it not bound to the surface of a metal?

Applicants argue that Van Alsten does not disclose the use of multifunctional linking molecules bonded to the surface of inorganic particles. This is not persuasive because: 1.) If an α - ω molecule is not a multifunctional linking compound (a) what is it? and (b) What is? 2.) Since applicants have put no limitations on the size of the particles bulk supports are particles and single atoms are particles 3.) If metals are not inorganic what are they?

Applicants argue that Van Alsten does not teach that the first and second functional groups are chemically bound to the respective surfaces of a corresponding pair of particles. This is not persuasive and applicants are directed towards figure 2, where it will be clearly seen that this argument is incorrect.

Applicants remaining arguments against this rejection are improper piece meal analysis of the references.. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicants argue against the 103 rejection over Guire in view of Van Alsten in further view of Bradshaw.

Applicants arguments have been fully considered but are considered improper piece meal analysis of the references. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references

individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES E. McDONOUGH whose telephone number is (571)272-6398. The examiner can normally be reached on 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571)272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JEM 2/7/2008

/Jerry A Lorengol
Supervisory Patent Examiner, Art Unit 1793